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I. Executive Summary

Overview:

The Chitina Health Clinic is currently a 720 SF clinic created from a minor renovation of a very standard 30 year old 12 x 60 ft mobile home trailer. A gable roof has been added to allow for the local snow loads and a covered ramp and stairs have been added to the front and rear entries. It has a waiting room, toilet/bathroom, office/triage room, one exam room, and secondary Human Services office. There are no vestibules on either entry. The trailer construction is very old and does not meet any standards of current construction. It has been modified due to heating problems with all exposed internal water piping, and is in extremely poor condition. The clinic is small for the current village population of 123 and especially small when considering the seasonal increases of up to 500 people in the area.

Renovation/Upgrade and Addition:

The Clinic will require a 1280 SF addition to accommodate the current need and Alaska Rural Primary Care Facility space guidelines. This addition is not possible on the existing site. The addition would require considerable additional pad filling or digging into the hill since the current trailer is already digging 30-40 inches into the bank. Providing an addition to the 30 year old mobile home is not practical. As can be seen from the documentation enclosed, the existing clinic will require major renovation to meet current code and standards as well. The cost of renovation and addition will far exceed the cost of a new clinic facility.

New Clinic:

The community has proposed that a new larger 2000 SF Denali Commission Medium Clinic can be constructed on a new site located approximately 300 feet from the existing clinic on an open piece of ground. We have included preliminary site plans based on the site that has been chosen.

The chosen site has existing utilities available and can be served easily. The Tribal Government President, Glen Daily, is in process of working further on the site selection and the ability to bring utilities to the site.

The community has completely supported this effort and have met extensively to assist in new site issues and to resolve any site considerations.

II. General Information

A. The Purpose of the Report and Assessment Process:

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility assessment, planning, design and construction. Over 200 clinics will be inspected through the course of the program. The purpose of the Code and Condition survey report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need between the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 3 and 4. The information gathered will be tabulated and analyzed according to a set of fixed criteria that should yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most efficient means to bring the clinics up to a uniform standard of program and construction quality.

A team of professional Architects and Engineers traveled to the site and completed a detailed Field Report that was reviewed by all parties. Subsequently, the team completed a draft and then final report of the facility condition.

B. Assessment Team:

Dan Williams P.E., ANTHC organized the assessment team. The team for this site visit was Gerald L. (Jerry) Winchester, Architect, Winchester Alaska, Inc.; Bob Jernstrom, PE, Jernstrom Engineering; and Dan Williams P.E., ANTHC; Tony, ANTHC Team members who assisted in preparation of report from information gathered included members of the field team above and Ben Oien PE, Structural Engineer; Tom Humphrey, PE, Electrical Engineer; Carl Bassler PE, Civil Engineer; and Estimation Inc.
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C. Report Format:

The format adopted is a modified “Deep Look” format, a facilities investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. The written report includes a floor plan of the clinic, site plan as available, and new plans for renovation/upgrade or completely new clinics. Additional information was gathered during the field visit which includes a detailed Field Report and building condition checklist, sketches of building construction details, investigations of potential sites for new or replacement clinics, and proposed plans for village utility upgrades. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

D. The Site Investigation:

On December 19, 2001, the team flew to the site and made observations, took photos, and discussed the needs with on-site personnel for the facility. Approximately three-four hours was spent on site, with sufficient time to investigate foundations, structure, condition, mechanical and electrical systems, and to interview the staff to assess current and projected health care needs.

Interviews were conducted with the Glen Daily, Tribal Government Administrator. The council staff provided information on the existing building, site, and utilities. Additional interviews were conducted with

Arlene Lenard, Tribal Operation Coordinator, and Charles Ketcham, Health Aide. These interviews provided clear understanding of the needs of the village, the clinic facility, and the users of the facility.

The Chitina Tribal Government and staff have reviewed the use of a Denali Commission Medium Health Clinic design adapted to the selected Chitina Site. They have agreed to proceed with final approvals of a site based on final determination of the most appropriate one.

III. Clinic Inspection Summary

A. Community Information:

Population: 123 (2000 Census)
Unincorporated, Unorganized Borough, Copper River School District, Ahtna Native Incorporated

Location:
Chitina is located on the west bank of the Copper River at it confluence with the Chitina River, at mile 34 of the Edgerton Highway, 53 miles southeast of Copper Center. It lies outside the western boundary of the Wrangell-St. Elias National Park and Preserve, 66 miles southeast of Glennallen. It lies at approximately 61d 31m N Latitude, 144d 26m W Longitude. (Sec. 14, T004S, R005E, Copper River Meridian.) Chitina is located in the Chitina Recording District. The area encompasses 84.6 sq. miles of land and 11.1 sq. miles of water. The climate in Chitina is continental, characterized by long, cold winters and relatively warm summers. Snowfall averages 52 inches, with a total annual precipitation of 12 inches. Temperature extremes have been recorded from -58 to 91.

History:
Athabascan Indians have reportedly occupied this region for the last 5,000 to 7,000 years. Archaeological sites are located to the south and east of Chitina. Chitina was historically a large Native village whose population was slowly decimated by the influx of people, disease and conflicts. Rich copper deposits were discovered at the turn of the century along the northern flanks of the Chitina River valley, bringing a rush of prospectors and homesteaders to the area. The Copper River & Northwestern Railway enabled Chitina to develop into a thriving community by 1914. It had a general store, clothing store, meat market, stables, a tinsmith, five hotels, rooming houses, a pool hall, bars, restaurants, dance halls and a movie theater. Almost all of Chitina was owned by Otto Adrian Nelson, a surveying engineer for the Kennecott Mines. He supplied electric power to all structures with a unique hydroelectric system. After the mines closed in 1938, support activities moved to the Glennallen area, and Chitina became a virtual ghost town with only the Natives and a few non-Natives staying on. In 1963, the Nelson estate was purchased by "Mudhole" Smith, a pioneer bush pilot, who sold off the townsite and buildings.

Culture:
Most residents are involved in subsistence activities year-round. During the summer, subsistence dipnetting for salmon on the Copper River brings a large number of Alaskans from Anchorage and other areas of the state. Gardening, berry picking, herb gathering and other "wildcrafting" are popular pursuits, as are various arts and crafts. Winter activities include trapping, snow machining, dog mushing, skiing and skijoring, and ice fishing.

Economy:

Employment is primarily with the village council, Village Corporation, Prince William Sound Community College, state Fish & Game and highway maintenance offices, or the National Park Service. Many residents are self-employed or work in retail establishments. The summer influx of fishermen, tourists and campers provides some cash income in fish guiding and other services. Two residents hold commercial fishing permits. Many villagers participate in subsistence activities year-round.

Facilities:

Residents haul water from a treated well source at the Fire Hall or have individual wells. The water system is operated by the Community Improvement Association of Chitina. Outhouses and individual septic systems provide sewage disposal. Less than 20% of homes are completely plumbed. Refuse collection services are available from Copper Basin Sanitation; the landfill at Glennallen is used. Residents desire a piped water and sewer system. A Feasibility Study has been completed, but a Master Plan is needed. The community wants a refuse transfer facility, and has partial funding to purchase an incinerator. To serve the heavy influx of tourists in summer, the community has asked for funding for a public facility with parking and an RV dump station. DOT is constructing a visitor wayside.

Transportation:

The Edgerton Highway and Richardson Highway link Chitina with the rest of the state road system. The State owns the Chitina Airport, with a 2,850' gravel airstrip, 5 miles north of town along the Edgerton Highway.

Climate:

The climate in Chitina is continental, characterized by long, cold winters and relatively warm summers. Snowfall averages 52 inches, with a total annual precipitation of 12 inches. Temperature extremes have been recorded from -58 to 91.

B. General Clinic Information:

Physical Plant Information:

The existing Chitina Health Clinic is a 30 year old 12 x 60 mobile home with minor renovations (See attached Plan) It is one of the small size clinics provided during the last twenty years in the program area. It has small a waiting room, exam room, toilet/bathroom, a small office work area, one secondary office for community health. It has a front entry with no vestibule and does not allow stretcher access. The rear entry has a stair and non-code compliant door. The clinic is served with water and sewer from the city. Sinks are provided in the exam room and in the toilet/bathroom. The facility is totally inadequate, small corridors, and cramped spaces.

Clinic program usage information:

We do not have the patient records that indicate clinic usage and area available from the Copper River Native Association. There is one full time and one part time health aides. The office space provided is entirely inadequate as it has all office functions, travel, files, and use by all health aides. The room contains a desk, copier, fax, and two chairs and other equipment and supplies.

Community Program Sheet:

The community program sheet P1.0 Services has been included if available on the next page. These sheets were completed during the Code and Condition Survey by ANTHC representative.

C. Program Deficiency Narrative:

1. Space Requirements and Deficiencies:

Space Comparison Matrix - Current Chitina Actual SF to Denali Commission Medium Clinic

Alaska Rural Primary Care Facility

	Current Clinic			Medium clinic					
Purpose / Activity	**Actual Net SF**			**ARPCF SF**			**Difference**		
		No.	**Net Area (SF)**	**Size**	**No.**	**Net Area (SF)**	**Size**	**No.**	**Net Area (SF)**
Arctic Entries			0	50	2	100			100
Waiting/Recep/Closet	169	1	169	150	1	150			-19
Trauma/Telemed/Exam			0	200	1	200			200
Office/Exam	112	1	112	150	1	150			38
Admin./Records	162, 67	2	229	110	1	110			-119
Pharmacy/Lab			0	80	1	80			80
Portable X-ray			0			0			0
Specialty Clinic/Health Ed/Conf			0	150	1	150			150
Patient Holding/ Sleeping Room			0	80	1	80			80
Storage			0	100	1	100			100
HC Toilet	49	1	49	60	2	120			71
Janitor's Closet			0	30	1	30			30
Subtotal Net Area			559			1270			711
Circulation & Net/Gross Conv. @ 45%			161			572			411
Subtotal (GSF)			720			1842			1122
Mechanical Space @ 8%						147			147
Total Heated Space			720			1989			1269
Morgue (unheated enclosed space)				30	1	30			30
Ext. Ramps, Stairs, Loading	As Required			As Required			As Required		

a. Overall space deficiencies: The size of the facility is about 1280 sf short of the ARPCF space requirements.

b. Specific room deficiencies: There are no vestibules, small waiting space, minimal office and storage space, no TDY, no trauma room. This in combination with other small spaces leaves the clinic very program deficient.

c. Other size issues: Mechanical room is non-existent, and there are no unheated or exterior storage areas, and circulation is narrow and very difficult.

2. Building Issues:

a. Arctic Entries - The main entry in not accessible for ADA and is impossible to get a gurney into the room. It does not have a legal ramp but it has storage of needed materials that cannot be stored inside the facility due to lack of room. The rear entry access is narrow and non-compliant and does not meet ADA or standards for gurney access.

b. Waiting / Reception –The waiting area contains a couch and couple chairs for secondary patient use and has equipment and other items stored in the room.

c. Trauma/Telemed/Exam – There is a no trauma room and exam room does not meet all aspects or requirements. There is only one room that is used for exam or some combination.

d. Office / Exam – There is one exam room, which is crowded with equipment. There was no capability of putting a patient in a gurney in the exam room. There is a sink in the old closet space in the room and sanitation for patients is an issue. Privacy is very difficult. Note that electrical service is completely inadequate for the needs of the equipment.

e. Administration / Records – There is one office room space used for all administrative, records, scheduling, and other functions. It is very small.

f. Pharmacy / Lab – There is not a Pharmacy and medicines are stored in locked cabinets in the exam room.

g. Specialty Clinic / Health Education / Conference - This function is completed in the exam rooms. There is no special area.

h. Patient Holding / Sleeping Room – There is no sleeping room and a rollaway bed for itinerant staff. The exiting does not meet code with window egress.

i. Storage – Storage is inadequate and is an impediment to safety and the operation of this clinic. There is a lack of adequate storage for needed medical supplies, files, and equipment in this facility. There is minimal storage and mostly it is in the exam rooms. There is storage in all the rooms.

j. HC Toilet Facilities – There is a toilet and bath facilities, however, none of the facilities or fixtures meet any ADA requirements or current codes.

k. Janitors Room – There is no janitor's room as required by code.

l. Mechanical/Boiler room – There is no mechanical room

m. Ancillary Rooms – There are no ancillary rooms as all space is used to maximum capacity including exam rooms, office, waiting room, corridors, and vestibules.

3. Functional Design Issues

This facility is functionally inadequate for its intended use. The spaces do not meet the functional size requirement, access is non-compliant, and the ability to perform required medical functions within the facility is severely hampered by lack of storage.

4. Health Program Issues

a. Vestibule and comfort:

The front door of the clinic is directly to the outside, which is inadequate to defer the heat loss. There is no ADA access or proper gurney access. The exam rooms are cold every time the door is opened and the cold air migrates into the clinic where patients are being attended.

b. Medical/Infectious Waste
This is being handled in a very basic method and is hampered by the small non-functional facility.

c. Infection Control
This is being completed with minimal long-term control due to lack of facilities. Floor materials are very worn out and replaced with multiple materials and sizes allowing for control problems. There are no rubber base materials, and wall and ceiling materials are also considerably lacking in cleaning ability. The exposed piping also provides very unsanitary conditions and impossible cleaning of the exam rooms.

d. Insect and Rodent Control
None noted or investigated

e. Housekeeping
The difficulty in cleaning and housekeeping in such a congested facility is understandable and is being done at the best level currently possible.

5. Utilities
   a. Water Supply
   Water is supplied by city water system.

   b. Sewage Disposal
   Sewer is supplied by city sewer system

   c. Electricity
   See Electrical Narrative.

   d. Telephone
   A single phone line services the clinic and is inadequate for current needs.

   e. Fuel Oil
   The fuel system is not adequate with some leaking having occurred around the existing above ground tank. There is not protection or containment for possible spilling.

D. Architectural / Structural Condition

1. Building Construction:

   a. Floor Construction:

The floor is mobile home 2x6 joist over metal frame beams with treated pony wall skirting on pad foundation system. There is some settlement and heaving which has caused doors to stick and floor to be uneven. There is approximately 2 inches of differential in the floor elevations. There is batt insulation of the pony wall system and joist space with 3/8" plywood soffit.

b. Exterior Wall Construction:
The walls are 2x3, 2x4 construction at 24" oc with R-11 insulation. The sheathing is plywood with metal siding. There appears to be fiberglass batt insulation with no vapor barrier and paneling plywood on the interior.

c. Roof Construction:
The roof is a 2x6 rafters at 24" oc with furring over rafters and metal roof. There is minimal roof shear plywood and ventilation is non-existent. There is over framing of the original mobile home roof with a gable 2x6 framing with metal roof. There is no access so determining adequacy was not possible. The insulation is probably R-19 batt insulation that is minimal in this climate and required upgrading to R-60.

d. Exterior Doors:
The exterior doors are residential wood and metal and very deteriorated. They are in very poor shape and need replacement.

e. Exterior Windows:
Windows are not thermo-pane windows; require complete replacement.

f. Exterior Decks, Stairs, and Ramps
There are no Arctic entries. The landing at the exterior door is deteriorating, and the stairs rise and run do not meet code. The ramp is steep and does not meet ADA and the handrails and landings do not meet code. Requires all new stairs, ramps, railings and landings.

2. Interior Construction:

a. Flooring:
The flooring is carpet over plywood. It has been replaced in many areas and is work out. Additionally carpet is not the preferred material for clinics due to clean ability and infection control issue. Entire replacement of sub-floor and finish is required to meet sanitary requirements.

b. Walls:
The walls are of 2x3 wood construction, with no sound insulation. The type of wall construction does not provide for patient privacy in any way. The finish is wood paneling and in serious need of repair and repaint.

c. Ceilings:
The ceilings are fiber board and need replacement for sanitation reasons.

d. Interior doors:
The interior walls are of hollow core wood construction that provides minimal construction durability and they are all in need of repair. Additionally, these doors are not acceptable for

patient privacy and sound control. There has been floor shifting and most of the doors do not close properly.

e. Casework:
The upper casework is minimal and the lower casework is of very poor construction. Plastic laminate tops that do not fit to walls and are damaged. The sanitary issues are very significant with the counters being of such poor construction. Need full replacement.

f. Furnishings:
The furnishings are very old and worn. There is an old couch in the waiting room and a variety of mismatched and old desks, chairs, and tables for other use. The exam tables are older as well.

g. Insulation:

Floor Insulation		R-11
Wall Insulation	R-11	
Attic/Roof Insulation		R-19
Attic Ventilation		NONE

h. Tightness of Construction:
The building is of poor overall construction, with numerous leaks in construction system at doors, floor, roof, and sills.

i. Arctic Design:
The vestibules are minimal, orientation is OK, and siting of the clinic is next to a large gully that probably needs additional fill.

3. Structural

a. Foundations
The foundation is pads supporting the trailer frame with gravel pad and is in poor structural condition. Posts have settled, walls are racked, and the building has floor level deviation and has substantial cracking on the interior. There not adequate hold down strapping and the bracing is loose or missing. In general the foundation needs substantial upgrade to new useful life or replacement.

b. Walls and Roof:
The walls and roof are not adequate for this climate and the roof has been over framed with a gable roof to withstand snow loading. None of the structural elements meet code.

c. Stairs, Landings, and Ramps
These elements are in poor condition and need of replacement with signs of rotting and deterioration of structural elements.

E. Mechanical Condition

1. Heating System
   a. Fuel Storage and Distribution
   The clinic's heating fuel oil storage tank is located adjacent to the building and not a minimum of 5 ft. as required by code. The 300-gallon storage tank does not have the proper venting, piping, or valving as required by code.

b. Oil-Fired Heater
A residential grade, oil-fired, "Toy stove" provides heating for the entire clinic. The heater is in good condition and does not provide the required heating needs of the Health Clinic. Additional electric heaters are used in some rooms of the clinic. The exhaust and combustion air opening for the heater is provided in the intake and exhaust kit mounted on the outside wall.

c. Waste Heat
Waste heat off the power plant generators provides limited heat for the Health Clinic. The waste heat is piped to the building and used in a few sections of baseboard within the clinic. The temperature of the waste heat is low and therefore does not provide much heat.

2. Ventilation System
   a. System
   There is no mechanical ventilation system and no operable windows to be used for ventilation. The windows do not open and as such do not provide any ventilation.

   b. Exhaust Air
   A ceiling mounted exhaust fan services the toilet room. The janitor's closet is not provided with an exhaust fan.

3. Plumbing System
   The clinic has no water and sewer service at the time of the inspection. All plumbing fixtures have frozen hot and cold water pipes and sewer connections. The plumbing fixtures are useless in the winter because of these problems.

   a. Water System
   The water system plumbing is typical ½" and ¾" copper distribution piping to the clinic exam sink and toilet fixtures. A well provides the water needs of the clinic and other city buildings.

   b. Sewer System
   A septic tank and drain field system provides the sewer needs of the clinic.

   c. Fixtures
   The toilet room plumbing fixtures are not ADA approved or UPC code compliant for barrier free access.

   d. Water Heater
   The electric water heater is installed in the exam room. Access to the water heater is limited. The water heater was turned off because the clinic had a frozen water service.

F. Electrical Condition

Chitina Health Clinic is in an older mobile home. The wiring has been modified from the factory original with the replacement of the original panel. The building is wired with NM Cable (Romex).

1. Electrical Service
    a. Electrical service is a typical service drop for a mobile home. The 100A meter/main is located on a utility pole adjacent to the trailer.

    b. The meter is GE SN 29808334 15A 240V 3W single phase. This meter is rated to low for this application at 15 amps. It should be a CL100 or 200. The meter /main has a KO on the side that should be sealed.

2. Power Distribution
    a. Panel A is 100 Amp load center with 8 poles total of which 1 is spare.

    b. The wiring in and near the panel has multiple problems. Romex and flex run without support. Neutral not properly identified. No equipment ground used. Ground and neutral wires improperly tied together. Panel does not have adequate clearance. Lug for ground wires inappropriate.

    c. Non-metallic sheathed cable (Romex) is used for the branch circuit wiring. Patient care areas need to be wired in metal raceways. NEC 517-13(a) and (b).

3. Grounding System
    Grounding of Electrical Systems
    a. The building has an exterior driven ground rod. The water bond and footing ground could not be verified.

    Grounding of Electrical Equipment
    b. Equipment grounding relies on the rigid conduit nipples connecting the Meter/Main with the sub panels. Current practice recommends a separate ground wire be run.

4. Exterior Elements
    a. Exterior lighting consists of a single incandescent fixture at the entry door.

    b. Exterior power receptacle were noted.

5. Wiring devices
    a. Receptacles are residential type, not hospital grade. NEC 517-81(b).

    b. Receptacle near exam room sink should be replaced with GFI type.

6. Lighting
    a. Foot candle measurements were taken and lighting levels are generally not adequate. The Exam room measured below 50FC and should be at least 75FC. Other areas were all pretty dim.
    b. The lighting is predominately 1x4 ft fluorescent T12 (2) lamp surface troffers. Lens are dirty, lamps are burned out and one fixture is not operating. These fixtures should be upgraded to T8 with electronic ballasts for energy efficiency and to increase the lighting levels.

c. Interior device plates are non-metallic ivory decorative plates.

7. Emergency System
   a. Building does not utilize battery backed emergency type exit signs. UBC 1003.2.8.

   b. The building does not have any emergency lights. UBC 1003.2.8.

8. Fire Alarm System
   a. There is no fire alarm protection in this building other then a single battery operated smoke detector located in the waiting room. ADA 4.28 and UBC 1105.4.5

9. Telecommunication
   a. Provisions for telephone wiring are minimal.

   b. No provisions for LAN were noted. (EIA/TIA)

10. Energy Management
    a. Incandescent entry light should be replaced. Rooms should have occupancy sensor switches installed.

G. Civil / Utility Condition

1. Location of building
   a. Patient Access
      Located in the relative center of the village for ease of access and seems to work fine. It is on the road to the airport which is an advantage.

   b. Service Access
      Road access is provided to front and rear entry. Neither stair access to rear, nor ramp and stairs to front entry meet code access requirements. Ramps are excessively steep providing a slipping hazard in winter months.

   c. Other Considerations:
      The facility is located in the center of town and allows for minimal expansion.

2. Site Issues
   a. Drainage
      Drainage from the site is adequate. There is a significant pad on which the building is constructed. Correction would include putting a new extended pad on the site prior to placing the new system.

   b. Snow
      There does not appear to be a snow-drifting problem as the facility sits in the open.

3. Proximity of adjacent buildings
   There is adequate space for any expansion on the current site.

4. Utilities
   a. Water Supply

The new city water supply provides adequate water for the facility.

b. Sewage Disposal
Sewage disposal is provided by City system.

c. Electricity
Power from Village system via overhead wire. See Photos

d. Telephone
Overhead phone with only one phone connection, requiring fax and phone on same line.

H. Existing Facility Floor Plan (Site Plans, New Clinic Plans, Regional Map):

We have attached drawings, as we have been able to identify, find, or create as part of this report. We have endeavored to provide all drawings for all the sites; however, in some cases exact existing site plans were not available. We have provided as indicated below:

A1.1 Existing Site Plan is attached if available

A1.2 Existing Facility Floor Plan is attached following.

A1.3 The Existing typical wall section is attached following as required by the report guidelines.

A2.1 The Addition to the Existing Facility as required to meet ARPCF Space Guidelines is attached following.

A3.1 The New Clinic Site plan is attached as proposed based on the community input.

A3.2 The New Denali Commission Clinic Floor Plan meeting the ARPCF Space Guidelines and proposed for this location is attached.

IV. Deficiency Evaluation

A. Deficiency Codes:

The deficiencies are categorized according to the following deficiency codes to allow the work to be prioritized for funding. The codes are as follows:

01 Patient Care: Based on assessment of the facilities ability to support the stated services that are required to be provided at the site. Items required for the patients social environment such as storage, privacy, sensitivity to age or developmental levels, clinical needs, public telephones and furnishings for patient privacy and comfort.

02 Fire and Life Safety: These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated life safety aspects of building codes including the Uniform Building Code, International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code. Deficiencies could include inadequacies in fire barriers, smoke barriers, capacity and means of egress, door ratings, safe harbor, and fire protection equipment not covered in other deficiency codes.

03 General Safety: These deficiencies identify miscellaneous safety issues. These are items that are not necessarily code items but are conditions that are considered un-safe by common design and building practices. Corrective actions required from lack of established health care industry safety practices, and local governing body code safety requirements. I.e. Occupational Safety Health Administration (OSHA) codes & standards.

04 Environmental Quality: Deficiencies based on Federal, State and Local environmental laws and regulations and industry acceptable practices. For example this addresses DEC regulations, hazardous materials and general sanitation.

05 Program Deficiencies: These are deficiencies that show up as variations from space guidelines evaluated through industry practices and observation at the facility site and documented in the facility floor plans. These are items that are required for the delivery of medical services model currently accepted for rural Alaska. This may include space modification requirements, workflow pattern improvements, functional needs, modification or re-alignment of existing space or other items to meet the delivery of quality medical services. (Account for new space additions in DC 06 below)

06 Unmet Supportable Space Needs: These are items that are required to meet the program delivery of the clinic and may not be shown or delineated in the Alaska Primary Care Facility Space Guideline. Program modifications requiring

additional supportable space directly related to an expanded program, personnel or equipment shall be identified in this section; for example additional dental space, specialty clinic, storage, or program support space that requires additional space beyond the established program.

07 Disability Access Deficiencies: The items with this category listing are not in compliance with the Americans with Disabilities Act. This could include non-compliance with accessibility in parking, entrances, toilets, drinking fountains, elevators, telephones, fire alarm, egress and exit access ways, etc.

08 Energy Management: These deficiencies address the efficiency of lighting, heating systems/fuel types and the thermal enclosures of buildings, processes, and are required for energy conservation and good energy management.

09 Plant Management: This category is for items that are required for easy and cost efficient operational and facilities management and maintenance tasks of the physical plant.

10 Architectural M&R: Items affecting the architectural integrity of the facility, materials used, insulation, vapor retarder, attic and crawlspace ventilation, general condition of interiors, and prevention of deterioration of structure and systems.

11 Structural Deficiencies: These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 Mechanical Deficiencies: These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems, interior mechanical utilities, requiring maintenance due to normal wear and tear that would result in system failure.

13 Electrical Deficiencies: These are deficiencies with normal or emergency power, electrical generating and distribution systems, interior electrical and communications utilities, fire alarm systems, power systems and communications systems within a building that should be repaired or replaced on a recurring basis due to normal wear and tear that would otherwise result in system failure.

14 Utilities M&R: This category is used for site utilities for incoming services to facilities that are required for the building to be fully operational. Deficiencies may include sewer and water lines, water wells, water tanks, natural gas and propane storage, electric power and telecommunications distribution, etc.

15 Grounds M&R: Real property grounds components that should be replaced on a recurring basis due to normal wear and tear. Deficiencies with respect to trees, sod, soil erosion, lawn sprinklers, parking, bridges, pedestrian crossings, fences, sidewalks & roadways, and site illumination etc. are considerations.

16 Painting M&R: Any painting project that is large enough to require outside contractors or coordination with other programs.

17 Roof M&R: Deficiencies in roofing, and related systems including openings and drainage.

18 Seismic Mitigation: Deficiencies in seismic structural items or other related issues to seismic design, including material improperly anchored to withstand current seismic requirements effect. The elements under consideration should include the cost incidental to the structural work like architectural and finishes demolition and repairs.

B. Photographs:

We have provided photographs attached which are noted to describe the various deficiencies described in the narratives and itemized in the summary below. The photos do not cover all deficiencies and are intended to provide a visual reference to persons viewing the report who are not familiar with the facility.

We have included additional photos as Appendix B for general reference. These are intended to add additional information to the specific deficiencies listed and to provide general background information.

C. Cost Estimate General Provisions

1. New Clinic Construction

a. Base Cost: The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

- General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.
- The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

b. Project Cost Factors

- Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.
- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

c. Area Cost Factor: The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

d. Estimated Total Project Cost of New Building: This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

2. Remodel, Renovations, and Additions

a. Base Cost: The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis

Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

- The cost of Additions to clinics is estimated at a unit cost higher than new clinics due to the complexities of tying into the existing structures.
- Medical equipment is calculated at flat rate of approximately $32 which is the same amount as used for Equipment for New Clinic Construction. It is included as a line item in the estimate of base costs.

b. General Requirements Factor: General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

c. Area Cost Factor: The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

d. Contingency for Design Unknowns (Estimating Contingency): The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

e. Estimated Total Cost: This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

f. Project Cost Factors: Similar to new clinics, the following project factors have been included in Section VI of this report.

- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

g. Estimated Total Project Cost of Remodel/Addition: This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon

wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. Summary of Existing Clinic Deficiencies

The attached sheets document the deficiencies; provide recommendations on how to make repairs or accommodate the needs and provide a cost estimate to accomplish the proposed modifications. The summary addresses individual deficiencies. If all deficiencies were to be addressed in a single construction project there would be cost efficiencies that are not reflected in this tabulation.

These sheets are reports from the Access Data Base of individual Deficiencies that are compiled on individual forms and attached for reference.

Refer to Section VI. New Clinic Analysis for a comparison of remodel/addition to new construction.

VI. New Clinic Analysis

The analysis of whether a new clinic is required is based on the Denali Commission standard of evaluation that "New Construction is viable if the cost of Repair/Renovation and Addition exceeds 75% of the cost of New Construction".

We have therefore determined the cost of a New Clinic Construction to meet the Alaska Rural Primary Care Facility (ARPCF) Space Guidelines for the size of village. We have also determined the cost to Repair/Renovation and Addition to the existing Clinic to meet the same ARPCF Space Guidelines.

A. The cost of a New Denali Commission 1500 SF Small Clinic in Chitina is projected to be:

• Base Anchorage Construction Cost per sf.			$183
• Project Cost Factor:		@ 45%	$ 82
Medical Equipment	17%		
Construction Contingency	10%		
Design Fees	10%		
Construction Administration	8%		
• Multiplier for Village		@ 1.28	$ 74
Adjusted Cost per SF			$339

Projected Cost of a New Clinic: 2000 sf. X $339 = $678,000

B. The cost of the Repair/Renovation and Additions for the existing Clinic are projected to be:

• Code & Condition Repairs/Renovations			
Cost from Deficiency Summary			$366,652
• Remodel/Upgrade work (See Def. Code 01)			
100% of clinic 720 SF = 720 SF @ $103/SF			$ 74,371
• Additional Space Required by ARPCF – (See Def. Code 06)			
○ Base Anchorage Cost			$226
Medical Equipment			$ 32
Additional Costs –			$ 98
General Requirements	20%		
Estimation Contingency	15%		
○ `Multiplier for Village		@1.28	$ 98
Adjusted Cost per SF			$454
Total Addition Cost of 1280 SF @ $454			$581,674
• Project Cost Factor:		@ 28%	$286,936
Construction Contingency	10%		
Construction Administration	8%		
Design Fees	10%		

Total cost of remodel/addition $1,309,633

C. Comparison of Existing Clinic Renovation/Addition versus New Clinic:

Ratio of Renovation/Addition versus New Clinic is:
$1,309,633 / $678,000 = 1.93 x cost of New Clinic

Based on Denali Commission standard of evaluation; the remodel/addition costs are more than 75% of the cost of new construction. A new clinic is recommended for this community.

* Note: Village factors may have been adjusted for recent 2001 cost adjustments and may have changed from previously published data distributed to the villages.

D. Overall Project Cost Analysis:

The overall project cost analysis below incorporates land, multi-use, utility costs, and road access costs, and project management fees if any are associated with the project.

Item	Quantity	Units	Unit Cost	Area Adjustment Factor	Total Cost	Allowable under "Small" Clinic Process (yes/no)
Primary Care Clinic (Allowable)	2000	SF	$265.00	1.28	$678,000	yes
Clinic (Non-allowable portion)	0	SF	$265.64	1.7	$0	no
Land	15,000	SF	$2.00	1	$30,000	yes
Multi-Use Facility Design Cost	0	LS	$0.00	1	$0	yes
Multi-Use Facility Construction Cost	0	LS	$0.00	1	$0	no
Utility Extension/Improvements	1	LS	$15,000	1	$15,000	yes
Road access & parking lot improvements	1	LS	$5,000	1	$5,000	yes
Subtotal					$728,000	
Project Management Fees					Unknown	
Total Project Cost					**Unknown**	

VII. Conclusions and Recommendations

The existing Chitina Clinic has served the community well for many years. Base on current ANTHC and Copper River Native Assoication delivery model for health care to rural Alaska, the facility is not adequate in size or in condition to meet these needs. The existing structure could be adapted for many other less clinical and medically stringent uses without extensive remodeling.

After careful review it is the recommendation of the consultant team that a new Denali Commission 2000 SF Medium Clinic be considered for Chitina. The addition of approximately 1280 sf of clinic space required by the current ARPCF Program Space Guidelines and the major renovation and upgrading of the existing clinic space will cost 1.93 times the cost of a new clinic. This results in the recommendation of a new clinic for this village.

We reviewed the options with the local community leaders the consensus was that the New Medium Clinic would meet the current community needs and for years to come. In addition, they agreed that there is a good adjacent site that is available for construction of a new clinic. The site is adjacent to all existing utilities.

The community believes this is a good solution and will produce the best return for funds invested in a clinic that meets the needs of Chitina Community and is aggressively moving to assist in any way to accomplish this goal.

Appendix A: Specific Deficiencies Listings

The attached sheets represent the individual deficiencies identified for this project and the corrective action required to meet current codes and standards of construction. The deficiencies are further summarized in Section V. Summary of Existing Clinic Deficiencies.